



COLORADO RIVER DISTRICT
PROTECTING WESTERN COLORADO WATER SINCE 1937

Colorado River District Demand Management Stakeholder Advisory Committee Report

August 9, 2021

INTRODUCTION

In the Spring of 2019 and in response to almost two decades of severe drought in the Colorado River basin, the seven Colorado River Basin states and the federal government executed a series of agreements collectively known as the Drought Contingency Plan (DCP) and succeeded in sponsoring federal legislation adopting the agreements. Among the agreements affecting the Upper Basin is an agreement titled the Upper Basin Demand Management Storage Agreement, the terms of which commit the four Upper Division states to explore the establishment of a program that intentionally conserves consumptive use of water, through temporary, voluntary and compensated mechanisms and provides a storage account in Lake Powell and the upper Colorado River Storage Project Act reservoirs (Aspinall, Flaming Gorge and Navajo) of up to 500,000 acre feet (AF) for the Upper Basin’s conserved consumptive use, should the Upper Colorado River Commission and all four states decide to move forward with such a program.

In the years and months leading up to the adoption of the DCP documents, the Colorado River District (CRD) together with the Southwestern Water Conservation District (SWCD) (collectively, “the Conservation Districts”) expressed concerns about potential disproportionate impacts to Western Slope agriculture if a demand management program is implemented without sufficient sideboards or controls to prevent disproportionate impacts to the West Slope and/or agriculture. The Conservation Districts initiated a dialogue with the Colorado Water Conservation Board (CWCB) and the Front Range Water Council (FRWC) seeking statewide agreement on principals designed to protect Colorado and the West Slope’s interests from the potential negative impacts of a Demand Management program. This statewide discussion ultimately led to the CWCB’s November 15, 2018, adoption of a document titled, “*Support and Policy Statements Regarding Colorado River Drought Contingency Plans, Demand Management and Compact Administration*” which set forth the CWCB’s guiding principles as it evaluates the feasibility of a Demand Management program in the state of Colorado.

In the intervening years, there has been significant discussion and study around the feasibility of a demand management program in Colorado. Many of these discussions have been organized and directed by the CWCB in its role as our state’s principal water policy agency, however, many other groups, including the CRD have also engaged in discussion, evaluation, and testing of elements of



a potential demand management program. The CRD is engaged in these discussions in order to fulfill its mission, *“to lead in the protection, conservation, use, and development of the water resources of the Colorado River Basin for the welfare of the District, and to safeguard for Colorado all waters of the Colorado River to which the state is entitled.”* More specifically, the CRD is empowered, *“to make surveys and conduct investigations to determine the best manner of utilizing stream flows within the district and the amount of such stream flow or other water supply . . . and to perform all acts and things necessary or advisable to secure and insure an adequate supply of water, present and future, for irrigation, mining, manufacturing, and domestic purposes.”* CRS §37-46-107(1)(c).

The CRD Board has not formally taken a position supporting or opposing the establishment of a demand management program in Colorado. The CRD, collaborated with partners including but not limited to, SWCD, The Nature Conservancy (TNC), Tri-State Generation and Transmission, Inc., Uncompahgre Valley Water Users Association, the Upper Gunnison River Water Conservancy District, the Grand Valley Water Users Association and all four West Slope Round Tables to conduct several related evaluations including but not limited to, Phase III of the Colorado River Risk Study, the Secondary Economic Impact Study, and convened the group of stakeholders that resulted in this report.

Through all of these discussions, it became clear that there is not unanimous agreement regarding the advisability and/or feasibility of a demand management program among constituents within the River District boundaries. There are water users and constituents who have embraced the concept of a demand management program, there are others who are adamantly opposed and there appears to be a significant number of constituents who are hesitant, undecided or have no opinion due to being not sufficiently informed about the complexity of the hydrologic imbalance in the Colorado River and the even more complex range of solutions or potential outcomes.

Given the variety of perspectives on the potential demand management program, the CRD initiated this grassroots stakeholder process to advise the CRD and the CWCB staff and boards. CRD believed that by creating an advisory stakeholder group, which is representative of the various geographic regions and water user sectors within the sprawling CRD territory, CRD could create a process where water users were provided information and education on the various aspects of a potential demand management program and then through an open, collaborative and facilitated dialogue, those water users could provide direction and advice to the CRD staff who would then report to both the CRD board and the CWCB with the hopes of influencing the structure, shape and operation of a potential demand management program in Colorado.

STAKEHOLDER GROUP COMPOSITION

The committee included sixteen stakeholders representing interests from across the West Slope.



Stakeholder	Basin	Sector	Organization
Mike Berry	Gunnison River	Municipal Water Provider	Tri-County Water Conservancy District
Jackie Brown	Yampa River	Energy	Tri State Generation and Transmission, Inc.
Paul Bruchez	Colorado River	Agriculture	Reeder Creek Ranch
Mike Camblin	Yampa River	Agriculture	Maybell Ditch Company
Jason Cowles	Colorado River	Municipal Water Provider	Eagle River Water & Sanitation District and Authority
Aaron Derwingson	West Slope	Environment	The Nature Conservancy
Allen Distal	Gunnison River	Agricultural Water Provider	Bostwick Park Water Conservancy District
Scot Dodero	Colorado River	Agricultural Producer and Agricultural Water Provider	Silt Water Conservancy District
Daris Jutten	Gunnison River	Agricultural Producer and Agricultural Water Provider	Ouray County Water Users Association/Uncompahgre Water Users Association/Lazy K Bar Land and Cattle Co.
Kirsten Kurath	Colorado River	Municipal Water Provider	Ute Water Conservancy District
Chelsie Miera	West Slope	Energy	West Slope Colorado Oil & Gas Association, Executive Director
John Redmond	Yampa River	Agricultural Producer and Agricultural Water Provider	Upper Yampa Water Conservancy District, Irrigator
Ben Rogers	White River	Agriculture	Highland Ditch Company
Gary Shimanowitz	Colorado & Gunnison Rivers	Recreation	Vail Associates
Andy Spann	Gunnison River	Agricultural Producer and Agricultural Water Provider	Upper Gunnison River Water Conservancy District
Troy Waters	Colorado River	Agricultural Producer and Agricultural Water Provider	Grand Valley Water Users Association



PROCESS

At the end of 2020, a Demand Management Stakeholder Advisory Committee was convened by the CRD with the purpose of providing insight and guidance to the CRD on how a demand management program could serve the interest of the West Slope. The committee’s purpose was to:

- Confirm and refine the guiding principles to inform the development of a demand management program that addresses the specific interest of the Western Slope water users.
- Identify the desirable and undesirable aspects of a potential demand management program based on the most up to date concepts being explored.
- Identify preferred criteria for how to evaluate a demand management program.
- Identify where additional legal and/or technical information is needed to address the concerns of the Western Slope water users.

Emerging early from the process was the identification of the values and interests that the committee wanted to represent. The values and interests remained consistent throughout this process.

Value Statements
<ul style="list-style-type: none">● COLORADO’S BEAUTY: Snow on the mountains, green valleys, and water in the rivers define Colorado.● HERITAGE: Agriculture and recreation are the heritage of Colorado and are intertwined. Agriculture is integral to our communities, supports our scenic vistas, and agricultural flows benefit river systems, particularly during droughts.● HEALTHY ECOSYSTEMS: Wildlife habitat and healthy river systems provide critical ecosystem services and support our agriculture, tourism-based economy, and our high quality of life.● THRIVING ECONOMIES: Local communities across the state have resilient, vibrant, and diverse economies.● FAIRNESS: We value everyone participating in the creation of solutions that do their best to address our individual and shared needs with the recognition that it is impossible for anyone to get everything they want.● STEWARDSHIP: We understand water is life and are committed to wise water resource management. This is demonstrated by the fact many of us are already working on water resource management projects.

In addition to exploring more specific recommendations, the committee spent significant time addressing questions of Colorado River management, how a demand management program might be structured, public perceptions that could impact participation, and the interrelated negative impacts that drought and involuntary curtailment could have on agriculture, local economies, and river systems.



One of the desired outcomes of the committee process was to explore how agriculture can be successful and thrive despite increasing pressures within the Colorado River Basin. The stakeholders representing the agriculture perspective expressed:

- Clear understanding of the changing conditions in the Colorado River Basin and frustration with the Colorado River 2007 Interim Guidelines which was perceived as driving basin states into an unnecessary crisis.
- A strong distrust of decision-making and programs driven by the state government. Many do not view the state as representing the best interest of agriculture on the West Slope and instead, are making decisions that are driven by East Slope and municipal interests. The committee, agriculture as well as those representing other interests, hold a profound fear that the West Slope agriculture will be sacrificed to meet the Front Range and Lower Basin urban interests, either through a demand management program, involuntary curtailment, or condemnation.
- A preference for a voluntary and compensated option, rather than mandatory requirement, for agriculture to cut back water use.
- Many producers have a concern that the development of a demand management program will be overly complicated or restrictive and therefore fail to achieve the intended goal of preventing a compact violation.
- A strong position that in order for agriculture to participate in any program, the pain has to be shared across sectors and the state. Otherwise, the program will not be viewed as fair and instead, viewed as agriculture bearing the full burden of a statewide problem.
- Agriculture has experience with responding to drought conditions and adjusting its operation. It is critically important for any program with the goal of reducing water demand to allow sufficient planning time for operators to plan to participate. Decisions are often made a year or more in advance of when crops are planted.
- The economics of a demand management program need to account for the full costs of water use reductions, within reasonable limits, to adequately incentivize participation. While demand management program participation may not be an economically viable choice for all agricultural producers, such a program needs to provide sufficient compensation to make participation a worthwhile alternative to production.
- Not all crops, soils, operations, or water systems are equal, and a demand management program needs to be flexible enough to allow for projects that may be more resilient to water demand management practices to participate more and include an adaptation of program design as learning occurs over time.
- Agricultural operators understand the need to become more resilient. If done thoughtfully and carefully, a demand management program could be a way for operators to invest in upgrades to their operation over time and to support the agriculture sector in Colorado.

The committee also expressed concern over the potentially devastating impacts to West Slope rural economies if the Colorado River Basin situation is resolved through either involuntary curtailment or a poorly designed demand management program. Agriculture has been a steady economic foundation in many communities and the loss of agriculture would likely result in the decline of the communities as well. The alternative economic development option touted is recreation which brings with it its own water resource management challenges such as adequate in-stream flows.



The committee was also tasked with identification of preferred criteria for a demand management program. The committee applied and evaluated the pros and cons of the different sideboards in a framework that resulted in agreement that sideboards need to be tailored to address different goals. This framework is below:

Question Criteria Address	Purpose of Criteria	Type of Criteria
1. Who participates in a program?	These criteria are intended to promote (and to the extent possible) support West Slope productive agriculture and preserve the integrity of local communities.	<ul style="list-style-type: none"> ● <i>By approval of the Board/Users.</i> ● <i>By length of time land has been under ownership prior to participation, although there was concern this would exclude new farmers and/or producers who purchase new ground.</i>
2. How often a landowner can participate in a program?	These criteria are intended to preserve the viability of local agricultural operations.	<ul style="list-style-type: none"> ● <i>A maximum length of time for a participant in a program for any single parcel.</i> ● <i>Limiting the amount/percentage of total acreage by a single landowner.</i> ● <i>Total cap on total participation within a geographic region.</i> ● <i>NRCS model of a limit on the total amount of financial compensation for an owner in a program.</i>
3. What process does a landowner need to follow to apply to participate?	This is a program design question about how an applicant applies for participation in a program and to whom.	<ul style="list-style-type: none"> ● <i>The applicant can demonstrate the benefits of a project using criteria established for the program.</i>
4. What criteria are used to review applications?	These criteria are intended to assess the cumulative impacts on a geography or system as well as the positive benefits to an applicant. All the proposed criteria are relevant at this stage.	<ul style="list-style-type: none"> ● <i>The review process should include all the criteria explored by this committee and the state in the pre-meeting prep as a mechanism for evaluating and demonstrating benefits and impact.</i>
5. Who reviews the applications and makes decisions?	This program design question is about who has control over decision making to make the assessment of the impacts/benefits.	<ul style="list-style-type: none"> ● <i>A program needs to include a strong local control mechanism.</i>
6. How are participants compensated and by whom?	This program design question addresses who has control of the market and its structure.	<ul style="list-style-type: none"> ● <i>A program needs to be managed by the State or an entity that has a primary goal of managing to achieve an outcome that supports the longevity of productive agriculture and food production.</i>

The findings and recommendations found in this summary report represent as far as the committee could go in finding the appropriate balance among diverse interests of the West Slope. Consensus



in this process was defined by each member feeling they had been heard, respected, and that the group had gone as far as it could in exploring the diverse interests of the group. Members were permitted to hold dissenting opinions without holding up the process. The group found agreements in principle as well as agreement around more specific recommendations. This report includes these areas of agreement as well as shares concerns.

Finally, the committee expressed a desire to remain engaged in future engagement processes as the state refines its recommendations on the feasibility for a demand management program. While the committee was able to find alignment around the recommended principles, the devil is in the details and could create conflict if implemented without additional stakeholder input.

GROUP FINDINGS & CONSENSUS

The following findings reflect the principal agreements that emerged from the stakeholder committee discussions. While the committee did not achieve consensus on all findings, there was most often general agreement in principle with concerns noted or need for additional information or details identified. The findings are organized into five themes:

- I. Statewide Climate Resilience and Adaptation;
- II. A Demand Management Program Must Reduce Compact Violation Risk;
- III. A Demand Management Program Must be Fair and Equitable Across Geographies; and Sectors;
- IV. A Demand Management Program Market Needs to Support the Agriculture Sector; and
- V. Potential Impacts of a Demand Management Program Should Be Mitigated.

I. Statewide Climate Resilience and Adaptation

- A. The Committee recommends that the Colorado River District and the State of Colorado not rely solely on a demand management program as a solution to the declining hydrology of the Colorado River Basin. If a demand management program is found feasible, it should be part of a broader strategy for creating a more resilient Colorado.**

Background:

There is unanimous consensus on this recommendation.

As part of the Committee's discussions from the beginning of this process, there has been agreement that a demand management program must be part of a larger strategy to address the declining hydrology in the Colorado River. All sectors, including agriculture need to, and can, become more resilient in the face of increasing hydrologic variability. A demand management program may offer participants an opportunity to pay for infrastructure investments and their costs that are necessary to transition to more resilient operation. However, a demand management



program alone is not adequate to prevent the potentially devastating impacts to the agricultural sector in Colorado arising from prolonged drought, water scarcity, and other threats. The committee recommends that the state also develop a broader vision and strategy for the role agriculture will play in the future.

B. The Committee recommends that CRD advocate for the Colorado Division of Water Resources, Office of the State Engineer to conduct an open, public outreach process resulting in the promulgation of proposed rules for curtailment for the Colorado River basin and its tributaries under the terms of Colorado’s interstate compact obligations.

Background:

There was not a consensus vote on this statement. The statement here reflects the Committee’s discussion and differences of opinion on the importance or unimportance for clarification of the rules preparing for a curtailment situation.

The group discussed the desire of some water users to understand the ramifications of a potential compact curtailment. For the participants, it was important to understand demand management in the broader context of the diminishing hydrology in the Colorado River Basin. Curtailment is the likely alternative should a demand management program, combined with other efforts to reduce risk to the state of Colorado, not be successfully established. The stakeholder group recognized that the science and facts on the ground (or in the river and its reservoirs) indicate that there is an increasing possibility, perhaps growing to a significant probability, that left unaddressed, the existing water allocation system could result in a failure by the Upper Basin to meet its compact obligation of 75-million-acre feet (MAF) on a running ten year average at Lee Ferry in the next eight to ten years. The group understood that should the obligation be interpreted to be 82.5 MAF over ten years (as is argued by some Lower Basin interests), the chances of failure are even higher.

The stakeholder group understands that should diminishing hydrology combined with consumption of water for uses that were not protected by use on the effective date of the compact (i.e., post compact water rights) cause the Upper Basin to not meet its obligations under the Colorado River Compact, significant and multi-faceted intra-state litigation is likely to break out between the basin states and the federal government.

Regardless of the outcome of the anticipated litigation, it is likely under this scenario that Colorado and other Upper Basin water users and communities would experience a significant lack of water security. This lack of water security would wreak economic havoc on West Slope communities and water users, hindering growth and investment throughout the region. Should this scenario develop to a situation where the Upper Colorado River Commission (UCRC) finds it necessary to order and apportion a curtailment among the Upper Division states, it is likely that the State Engineer will find it necessary, pursuant to the terms of the 1948 Upper Basin Compact to commence curtailment of post-compact water use.



The stakeholder group recognized that many of the major agricultural operations on the West Slope, i.e., the upper Gunnison valley, the Uncompahgre Project, historical irrigators in the Grand Valley as well as industrial users and irrigators in the Yampa Valley have significant pre-compact water rights. However, many of these water users depend upon water stored under post compact water rights to fully grow their crops or produce electric power. Additionally, there was a sobering recognition among the stakeholders that many of the municipal and rural domestic water suppliers (on both the Front Range and West Slope) rely on post-compact water rights. There was general agreement in the understanding that should a compact curtailment become probable, municipal operators will have little option but to acquire pre-compact water rights in an attempt to protect their critical water use, perhaps even through the use of eminent domain under the state's municipal constitutional preference.

In light of this, some participants, particularly the agricultural producers, believe that in order for water users to develop more certainty around declining hydrology in the Colorado River Basin, it is important to understand how, and when, the State Engineer will implement a compact curtailment should such a time arise that he or she is required to do so.

For the agricultural producers, a demand management program preferable to curtailment due to the proposed voluntary, compensated, and temporary nature of the demand management program. However, they expressed a preference for information about curtailment as a means to evaluating long term risks to production and incorporating plans for resilience into their operations.

Others on the committee perceive that the rules themselves likely do not offer the desired level of certainty about what might happen in a compact violation as hydrology will be the principal driver. The Colorado River Risk Study offers an assessment of the potential impacts of curtailment without any rules in place. It was agreed that the promulgation of compact curtailment rules could itself trigger litigation within Colorado – even in the absence of an actual curtailment order and therefore, not offer any of the desired clarity regardless of rulemaking

The committee agrees that advancing these discussions should not be tied to the feasibility and/or development of a demand management program, but independently pursued as part of a wider state resiliency effort.

C. The Committee recommends that CRD should advocate to the State of Colorado to make a stronger statewide commitment to water conservation and efficiency across all sectors through increased funding for programs and implementation of the State Water Plan, not just within the Colorado River Basin.

Background:

There is unanimous consensus on this recommendation.

The committee recognizes that the State of Colorado has been working successfully to plan for how to address future gaps in water supply and demand through the State Water Plan and



implementation programs. However, given the essential nature of water security as a basic societal need and the fast-changing hydrological conditions may be the new normal, the committee recommends that the state direct additional significant resources to this effort across all basins, not just the Colorado River Basin.

The committee recognizes that these programs cost money and there are limited sources of revenue for the State for such programs. However, many providers and water rights holders cannot achieve greater conservation and efficiency without financial and/or program capacity building support.

This issue transcends the Colorado River Basin and the State of Colorado, as a whole, to be better prepared to meet future water supply challenges. Without the state employing conservation and efficiency measures, the pressure on an already stressed Colorado River Basin will only increase as other basins look to the West Slope to shore up dwindling supplies.

The committee believes it is fair to ask everyone to participate. Questions remained to the willingness of owners of pre-compact water, especially in federal pre-compact water systems, to participate. Concerns also remained about the cost of implementing and operating efficiency measures. Efficiency does not equate to conservation and can result in additional consumption.

D. The Committee views approval of new transmountain diversion projects that divert additional Colorado River water to the East Slope in direct conflict with the request for water users on the West Slope to save water in order to stave off a compact violation. If a Demand Management Program is deemed feasible, the group recommends that both the CRD and the CWCB adopt a stronger position advocating for a temporary moratorium on diversions by new transmountain projects that will transfer additional water out of the Colorado River Basin.

Background:

There was unanimous agreement by the group on the tension between the need for a demand management program and the desire to create additional new transmountain diversion projects.

Transmountain Diversions (“TMDs”) have a significant impact on the West Slope and the Colorado River Basin given they are 100% consumptive and almost entirely post-compact in nature. The Committee agrees they are a driving factor in a potential compact violation and thus the state’s need for a demand management program. The Committee is concerned that during this unprecedented drought emergency, the TMDs have not minimized water withdrawals from the Colorado river in any meaningful way.

The operations of TMD reservoirs are interconnected with the health of the West Slope river systems. The Committee finds it inconceivable that under a demand management program, the West Slope could work to conserve 25,000 – 50,000 acre feet per year only to see the East Slope simultaneously increase water diversions to the Front Range. This situation would be antithetical to the goals of a demand management program and efforts to prevent a future compact violation.

This summer’s unprecedented drought has demonstrated how dire and critical the situation is on the Colorado River system. While the committee recognizes the need for the West and East Slope



to develop drought reserves and additional storage to meet future drought resilience goals, TMDs should not be able to do this at the expense of the Colorado River and the West Slope. The Committee discussed the challenges associated with limiting new diversions if a demand management program is created and were unable to find agreement on the details of implementation of a moratorium within the timeframe of this Committee. Their discussions included:

- Many of the representatives on this Committee are associated with entities that have agreements with decreed projects such as the Moffatt Tunnel and Windy Gap Firming Project. Others feel strongly not one more drop should be taken from the basin if a demand management program is implemented. While these projects are already moving forward, the Committee does agree it would not want to see anymore new projects exacerbate the Colorado River Basin challenges. However, finding an agreeable definition of what qualifies as a new TMD project was challenging for the Committee in the timeframe and, if pursued as a recommendation, will require additional stakeholder input and discussion.
- Within the State Water Plan update is a recommendation that the TMD diversions occur during periods of sufficient stream flows so as not to impact smaller tributaries that may experience physical shortages. Many have concerns that the TMDs that have been approved in the past were based on inadequate hydrological modeling, or those underway, have not sufficiently demonstrated that they are based on models that account for the changing hydrology within the Colorado River Basin. The timing of TMD withdrawals and the changing hydrological conditions should be part of managing TMDs.

Therefore, the Committee is opposed to allocating public funds to new TMD projects implementing diversions out of the basin at the same time the state is asking the West Slope to actively reduce depletions within the Colorado River Basin.

II. A Demand Management Program Must Reduce Compact Violation Risk

- E. The Committee recommends that the CRD should advocate to the State of Colorado to renegotiate the Drought Contingency Plan to include a larger storage account to ensure the threat of curtailment is adequately addressed.**

Background:

A majority of stakeholders agree with this recommendation.

The purpose of a demand management program is to reduce the negative impacts of a compact violation, yet the scale of the storage account and the timing of the delivery of water have implications on program success. It is a disincentive to program participation if the storage account is not sized correctly to make a meaningful impact toward avoiding or delaying a compact compliance event. The Colorado River Risk Study demonstrated, depending upon assumptions about hydrology, that a 500KAF storage account is insufficient to significantly reduce the risk of a compact curtailment. According to the Colorado River Risk Study, the storage account needs to be at least 1MAF, but more likely 2MAF, to create sufficient insurance against the risk of curtailment.



The committee acknowledges the challenge of asking for a larger storage account when the Upper Basin has not yet demonstrated that it can verify conserved consumptive use and shepherd water to fill a 500KAF account. The state engineer's office needs to demonstrate capacity to shepherd water, verify conserved consumptive use, and develop the operational guidelines for how to do so. In discussions of the size of the storage account, the committee participants expressed concerns including:

- There is significant concern that by needing to fill a 2 MAF account, it will cause significant damage to West Slope and the state's agricultural industry by exacerbating the pace of buy and dry. It is therefore imperative that the state create a guided market with proper protections designed to preserve agriculture and the communities that depend upon it.
- Agriculture producers on the committee expressed concern that if a demand management program is not designed to address the risks of compact violation, voluntary participation is simply a difficult step in what may become permanent and mandatory.
- While there was support for advocating for disconnecting the operations of Powell and Mead as a long-term solution, the participants understand that the coordinated operation is required under the 1968 Colorado River Basin Act.
- The committee expressed concern that negotiation of a larger pool should not occur without discussions about whether the Upper Basin states can continue to develop their allocation under the Colorado River Compact. This is related to recommendation I.D. which states that saving water within a demand management program is in conflict with the development of future depletions. A demand management program should not be used as augmentation for future depletions. The committee referenced Principle 4 of the Conceptual Framework in Chapter 8 of the State Water Plan as a demonstration of support for this concept at the state level.

The committee recommends that the state move forward with assessing the feasibility of a demand management program with a 500KAF storage account, but also to pursue a secondary long-term strategy advocating for a more favorable deal in the coordinated reservoir operations guidelines so that more water stays in Lake Powell to protect the Upper Basin and West Slope consumptive uses as was intended by the Colorado River Storage Protection Act. These two strategies, while interconnected, are not contingent on each other and pursuing the later should not occur at the expense of determining the viability of a demand management program.

III. A Demand Management Program Must Be Fair and Equitable Across Geographies and Sectors

- F. The Committee recommends that CRD advocate for the State of Colorado to adopt guidelines for proportional and equitable participation as outlined below. These targets are roughly proportional over time and establish thresholds for each basin, while supporting voluntary participation in the program by individual water providers/users.**



1. ***Proportional Share Between Upper Basin States. The Interstate proportional share between Upper Basin States to a pool should be based on the Colorado River Compact allocation. (51.75% for Colorado).***

This recommendation was supported unanimously by the committee.

2. ***Proportional Share Between East and West Slope of Colorado. Given post-compact depletions are the predominant reason a compact violation could occur, the intrastate proportional share between the East and West Slope of Colorado should be based on percentage of post-compact consumption. (Approximately 57% and 43% respectively from the Colorado River Risk Study Phase III).***

This recommendation was supported unanimously by the committee.

The participation in demand management conservation should be allowed by either post and/or pre compact use, but the allocation of respective obligations to a demand management pool should be based on post-compact consumptive use.

3. ***Proportional Share Per Basin Within Colorado. The proportional share between Colorado River sub-basins in Colorado should be based on percentage of post-compact consumption.***

This recommendation was supported in principle by the majority of the committee, but with concern expressed on how it would be implemented. First, within the West Slope, this approach could have a greater impact on the sub-basins that have a higher proportion of post-compact consumptive use compared to other West Slope sub-basins. Additionally, at the system level, some systems see the potential for a lot of savings. Other smaller systems feel they have already begun to adapt to hydrologic variability by investing in water efficient technologies on primarily small agricultural parcels and thus, see their ability to meet a target for reduced consumptive use in a demand management program as a major challenge. Flexibility in how to meet obligation targets across the West Slope will need to be included to accommodate this diversity. Finally, for voluntary participation to work to meet these desired participation levels, compensation has to be adequate to encourage voluntary participation and will vary by basin and between Front Range and West Slope to reflect different water market values.



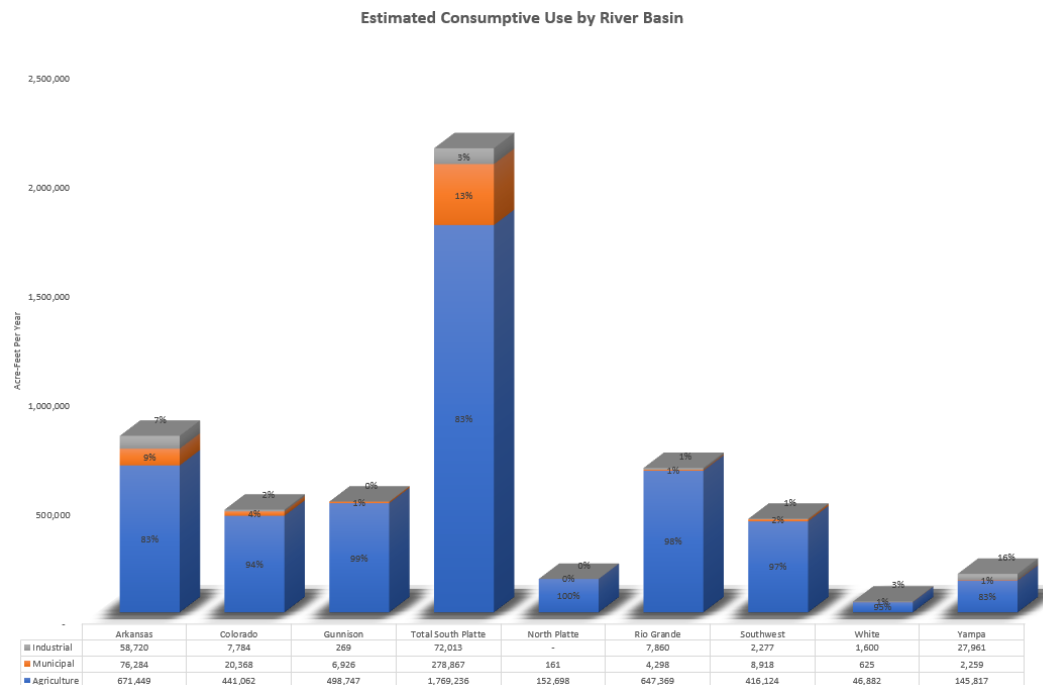
Figure 1: Colorado River Post Compact Use by River Basin

Colorado's Total Average Annual Consumptive Use for Colorado River Basin: 2.53MAF						
	Pre-Compact Acre Feet	Post Compact Depletion	Total Use (Pre and post compact)	Post Compact Percentage of Statewide Post Compact Use	Assumption: a 100KAF annual statewide obligation	Percent of specific basin's total Colorado River use
		Acre Feet	Acre Feet			
Yampa	138,544	58,438	196,982	6.30%	6,300	3.2%
White	50,173	11,887	62,060	1.30%	1,300	2.1%
Colorado In Basin	574,997	94,260	669,257	10.10%	10,100	1.5%
Transmountain Diversion	19,173	531,956	551,129	57.10%	57,100	10.4%
Gunnison	493,879	57,271	551,150	6.10%	6,100	1.1%
Southwest	322,561	178,157	500,718	19.10%	19,100	3.8%
Statewide Total Use	1.6M	931,969	2,531,296	100%		

4. Proportional Share by Sector. Each sector should contribute a proportional share of consumptive use to a pool within each basin.

This recommendation was supported unanimously by the committee with a recognition that a program cannot be uniform across sectors and instead, needs to address the different requirements of individual sectors as reflected in the remaining recommendations. The committee feels strongly that the burden for meeting a Colorado's demand management program obligation be shared by all sectors and not solely agriculture. Without participation across sectors, securing voluntary participation by agriculture will be challenging. The current rules may need to be modified to support participation across all sectors.

Figure 2: Estimated Consumptive Use by River Basin



*Consumptive use estimates are based on broad consumptive use ratio estimate for general understanding of water use and are applied to industry depletions from the 2019 Colorado Water Plan Technical Update. Consumptive use ratios were approximated as follows:

Agriculture - Based on Tech Update IWR vs Diversion Demand ratio and ranged from 19%-64% consumption of diversion demands,

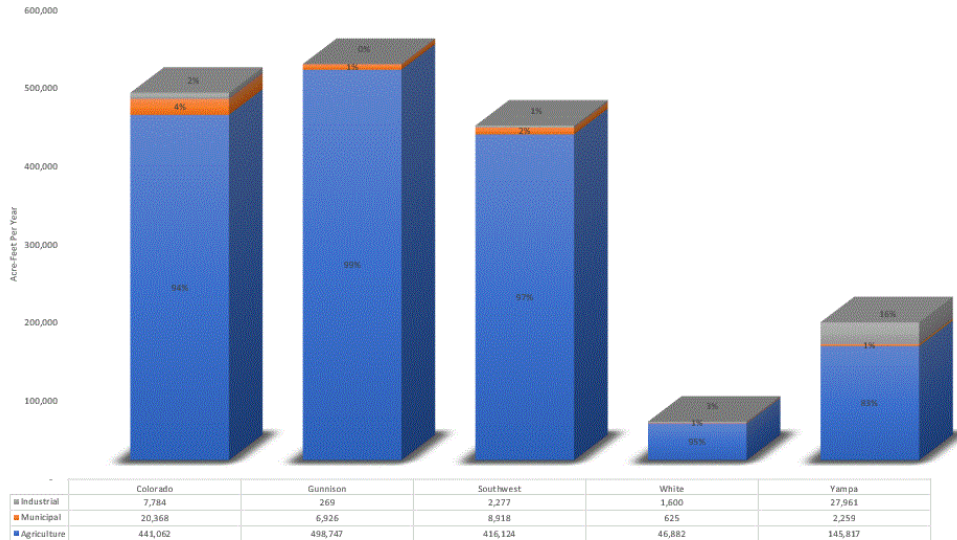
Municipal Indoor - 10% consumptive, Municipal Outdoor - 90% consumptive, Municipal Non-Revenue - 10% consumptive,

Industrial - 100% consumptive



Figure 3: Estimated Consumptive Use by West Slope River Basin

Estimated Consumptive Use by West Slope River Basin



*Consumptive use estimates are based on broad consumptive use ratio estimate for general understanding of water use and are applied to industry depletions from the 2019 Colorado Water Plan Technical Update. Consumptive use ratios were approximated as follows:
 Agriculture - Based on Tech Update IWR vs Diversion Demand ratio and ranged from 19%-64% consumption of diversion demands,
 Municipal Indoor - 10% consumptive, Municipal Outdoor - 90% consumptive, Municipal Non-Revenue - 10% consumptive,
 Industrial - 100% consumptive.

G. The Committee recommends that the CRD advocate for the State of Colorado to renegotiate the Drought Contingency Agreement to permit permanent water saving contributions by the Municipal sector to a Demand Management Pool.

Background:

A majority support this recommendation.

Meaningful municipal water savings often take significant investment and, if effective, permanent in nature thereby not complying with current Demand Management Storage Agreement definition of Conserved Consumptive Use under the but/for test. The state needs to encourage municipalities to participate and become more resilient in the face of dwindling supplies. Opportunities for municipal participation could include some form of a 5 or 10 year credit for quantifiable reduction in consumptive use from outdoor and/or indoor use for a temporary credit in the demand management storage account. Municipal operators see water efficiency as means to shoring up existing supplies so they can accommodate future growth without acquiring new supplies as well as building resilience against future droughts. To accomplish these savings may require investments in new programs, staff, and consultants. This program could help the state to incentivize and expedite more efficient urban use across Colorado as directed in the State Water Plan. However, like TMDs, Municipalities should not receive credit or payment under a demand



management program for conservation measures which are not contributing water into the storage account.

IV. A Demand Management Program Needs to Support the Agricultural Sector

H. The Committee recommends that CRD advocate that a demand management program, if found feasible, is designed to accomplish the following:

- 1. The framework and rules are established by the State of Colorado with the overarching programmatic goals to prioritize water conservation for the purposes of reducing the risk of a compact violation and preservation of productive agricultural in Colorado.**
- 2. To achieve the goals. The program requires a managed market with appropriate sideboards and a strong element of local control. (See recommendations under Section IV.)**
- 3. The program must protect water users from injury and the market compensation per acre foot is adequate to incentivize participation.**

Background:

There was unanimous support for this recommendation.

The stakeholder group believes that the state has a legitimate statewide interest in establishing a market structure and enforcing rules which are intended to promote and encourage the longevity of productive agriculture in Colorado and the ability for Coloradoans to own and operate farms. The viability of Colorado's small rural communities is dependent upon local ownership which serves as an important base sector in local economies in our state. The committee discussed both the pros and cons of a free market compared to a more structured market within the context of a demand management program.

Water rights are a property right and many producers want to retain the right to sell their property if they cannot continue in agriculture due to economics, water availability, or some other factor. Agricultural water right owners on the committee shared a belief that a well-designed water market as part of a demand management program can be supportive of the long-term viability of productive agriculture in Colorado.

Therefore, it is of critical importance to the stakeholders that the program, if being established by the state and funded, in part or in whole with public money, be designed and run to achieve the important public interests of producing conserved consumptive use water to assist the Upper Basin in meeting its compact obligations and simultaneously establishing structures and rules to preserve and enhance productive agriculture and the rural communities that depend upon it.

While the committee agrees on the goals of the program, the discussion of market structures included many diverse perspectives and concerns including:



- Some members expressed concern over the behavior of water investors operating on the West Slope today and methods they employ as being destructive to productive agriculture. This behavior was viewed as unacceptable and agreed the program participation rules should be designed to limit negative outcomes. Others took a neutral stance on water investments by non-agricultural operators.
- The committee was not in agreement and held diverse opinions on the state's anti-speculation rules. Some members expressed an opinion that the state's existing anti-speculation law and practices are adequate to prevent speculative interests, but do not limit the buy and dry of agriculture. The permanent dry up of agriculture was agreed to as the major threat to the West Slope.
- Concerns were expressed about the state's ability to manage and fairly implement a complex program.
- Concerns were expressed about the potential to abuse a demand management program by buying agricultural properties for the sole purpose of drying up agriculture to profit from water leases.
- Committee members expressed both support and concern about having a sole buyer structure.

I. The Committee recommends that the CRD advocate for limits to eligibility for participation in a demand management program as outlined below.

Background:

There is unanimous support for this recommendation.

In order for a demand management program to successfully achieve the goals of supporting productive agriculture in Colorado and preventing buy and dry, the committee agrees that there needs to be guidelines for program eligibility. The committee explored pros and cons of sideboards for who ought to be eligible to participate, the length of participation, and the frequency of participation. The following were identified as program eligibility guidelines which might be the most effective:

- 1. The committee believes that certain NRCS program rules should be examined as successful models in preventing large corporate interests from enrolling in and/or playing the system for their economic benefit at the expense of the local community and Colorado's productive agriculture.**

The committee agreed on the effectiveness of this guideline, but for the purposes of a demand management program they were concerned the AGI limitations could be too strict for some large local operators in some regions, and it would prevent participation that would otherwise be beneficial to the state. They agreed that with this guideline, there should be flexibility during the eligibility review process with local input determining whether this guideline should be waived.

- 2. The Committee recommends that the CRD advocate for carefully designed rules limiting the number of consecutive years that any single parcel of land can be enrolled**



in the program and limits on the percentage of any one agricultural producer that can participate in the program.

The Stakeholders believe that it is important that this program be designed in a manner that does not support and/or imitate the effects of buy and dry. Therefore, it is critical to the members of the committee that a demand management program not have the effect of permanent reduction in agricultural production.

By creating limits on the percentage of total land owned by a single person or entity can enroll in the program and/or how long an individual parcel can remain enrolled in the program, it may prevent the departure from agricultural production and/or speculative investment in West Slope agriculture. These two parameters need to be considered together in a review of participant eligibility. If a greater percentage of a landowners land is enrolled, for example, the length of time may need to be adjusted limiting the total number of years of eligibility.

Concerns were expressed that such a program has to be carefully designed. While a program should not encourage abuse of the system, such as the acquisition of large portfolios of land under shell corporation in order to avoid program sidebars, the program also needs flexibility and local input to account for the different regional context and land configurations. For example, the committee acknowledged that there may be landowners with sufficient land to conduct long term crop rotation which would support program goals and benefit the individual producer.

J. The committee recommends that any demand management program contain rules that prevent permanent dry-up on a regional or ditch-system basis.

Background:

There is near unanimous consent by the stakeholders on this recommendation.

The committee recognizes that, even if specific parcels are not permanently taken out of production, a large-scale demand management program could result in the permanent dry-up of a percentage of a ditch-system or regional agricultural area. To avoid the adverse impacts of dry-up, any program must contain rules to prevent a permanent reduction in the percentage of irrigated acres within a ditch-system or regional economy resulting from participation. The committee agrees that the local control mechanisms in III. M. is essential to helping to review for this negative impact.

K. The Committee recommends that CRD advocate for a strong role for local and/or regional entities in the determination of who is eligible to participate in a demand management program.

Background:

The committee unanimously supports this recommendation.



The committee recommends that the state adopt guiding principles and a program structure that allows for decision making control at the basin or community level, depending on local capacity and organizational preference. The committee makes this recommendation for several reasons:

- Designing a demand management program that includes local control will help mitigate concerns that the interest of the state or East Slope will predominate over interests of the West Slope.
- If the program has an element of local/regional control, there will be greater acceptance and participation than if it is solely a state-run program.
- Sideboards, while well intended, can also become a barrier or even an impediment to achieving the program goals. Within agriculture, it is difficult to have a program that can be successful for everyone without a program being very flexible. There is concern by many on the committee that, by placing sideboards and restrictions on participation, that it takes the flexibility out of the program. Yet for others, without sideboards, the program could potentially be exploited to expedite the buy and dry of agriculture. Finding an appropriate balance is best done at the local level. A local or regional entity can, within the structure of the program established by the state, have flexibility to adapt the program to local and regional values and concerns. The committee believes that in a best-case scenario, each water system would collaboratively identify the best way their own system could participate. The sideboards need to exist to offer protection in lieu of this scenario. With a local control element, sideboards can be adjusted for local context when needed to better achieve program goals.
- Local or regional administration is more likely to lead to the preservation of local agriculture and strong local communities while still achieving the statewide goal of producing conserved consumptive use for the purpose of compact compliance.
- A local control element supports the ability to assess projects for both positive and negative impacts and what mitigation may be required for project approval.

Some members of the committee expressed strong opinions about the dangers of the state, and/or the CRD, taking away decision making from the local agricultural operator. The state could look to existing structures (Conservation and Conservancy districts and ditch boards) to assist in determining how a local control element can be designed and implemented. The committee recognizes there is wide variability in capacity of individual systems and in those cases where capacity is low, support will need to be provided during the application review period. Higher capacity institutions, on the other hand, want to be able to make their own decisions about how to manage a demand management program for their system. A local control element needs to provide both options.

V. Potential Impacts of a Demand Management Program Should Be Mitigated

- L. The Committee recommends that the CRD advocate for the State of Colorado to seek to design programs to maximize co-benefits or allocate resources to mitigate environmental harm resulting from a Demand Management Program.**



Background:

There was unanimous agreement on this recommendation.

The committee understands that the West Slope economy is inextricably linked to water and the health of the environment. Without healthy river systems, many local economies on the West Slope which are dependent on agriculture and/or recreation-based tourism will collapse. The committee recommends using science and facts, not emotions or perceptions, to guide the design of a project that results in co-benefits including, but not limited to protection for riparian and aquatic habitat, fish species, and in-stream flows. The CRD should advocate to the state to make resources and tools available for projects to understand and develop mechanisms for minimizing harm and maximizing benefits.

M. The committee recommends that any Demand Management Program include requirements for funding mitigation of the adverse secondary impacts to regional economies that may result from a Demand Management program.

Background:

There was unanimous support for this recommendation as well as agreement on how challenging successful implementation of these types of programs can be.

Sustaining the link between the agricultural sector and vibrant rural communities on the West Slope was critical to the committee. The committee viewed prolonged drought and involuntary curtailment as a worst-case scenario to the West Slope communities. A demand management program also has the potential to have an economic impact on the West Slope. The committee recommends an economic mitigation program be established to mitigate negative economic impacts.

However, the committee has experience with ineffective mitigation funds that do little to support those most impacted by economic downturns. The committee recommends that a program direct resources and/or partner with existing programs and departments with a track record of offering support for agricultural producers, drought resilience, and economic resilience.

N. The Committee recommends a Demand Management Program incorporate an adaptive management approach to accommodate learning, new information, and changes in conditions.

Background:

There was unanimous agreement on this recommendation.

Given a demand management program is a new concept and even if found feasible will likely get things wrong, which will require modifications in the future. The committee feels strongly that the



program needs to allow for adjustments as results and implications of various actions become better understood. That state should adopt an adaptive management approach of iterative planning, doing, assessing, learning, and then applying what was learned to the next iteration of the program design and management. The adaptive management process should be transparent and seek out lessons learned from program participants, water managers, water users, and community stakeholders.